



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,350	01/25/1999	ISAMU UENO	35.C13282	1615

5514 7590 12/27/2002

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

TOPPIN, CATHERINE J

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/236,350

Applicant(s)

UENO ET AL.

Examiner

Catherine Toppin

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-19 and 24-37 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner suggests a title such as: Image Pickup Apparatus with Difference Signal Readout Means.

Drawings

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 102. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2612

5. Claims 1-8, 11-19, 24-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Ukita (US 6323901). As for claims 1, 2, 36, and 37, Ukita discloses an image pickup apparatus (solid state imaging device) comprising a plurality of pixels and a color filter array of four colors disposed on said plurality of pixels wherein said color filter array has a periodicity of two rows x two columns, wherein the four colors are all different and transmit and intercept light as claimed. (See figure 2.) In reference to the following discussion, although the image signal apparatus, image signal processing method, image signal read method and computer readable storage medium are distinct embodiments of the claimed invention, the examiner interprets analogous limitations within the corresponding claims as indistinguishable, and are rejected as follows.

6. As for claims 3, 12, 14, 24, 28, 32 and 36, Ukita teaches the claimed operation $A + B - C - D$ in the calculation of the luminance signal in column 15, line 27-28 where Mg, G, Ye and Cy correspond to A, B, C, and D respectively. As for claims 4, 13, 15, 25, 29 and 33, signals A and B and C and D are shown to be disposed on the same line or column. (See figure 2.) As for claims 5, 16, 26, 30, 34 and 37, Ukita also teaches the claimed operation $A + C - B - D$, where A, B, C, and D correspond to the color signals as discussed above. As for claims 6, 17, 27, 31 and 35, figure 2 similarly shows the signals as disposed on a same line or same column as claimed. As for claim 7, the reading means claimed are not distinct from the operations of claims 3 and 5. The examiner interprets the two means for reading a difference between the addition signals as claimed as equivalent to the operations $A + B - C - D$ and $A + C - B - D$ respectively, and are rejected for reasons discussed above. As for claim 18, the image signal read method claimed is not interpreted as substantively distinct from the previously rejected image pickup apparatus of claim

7.

Art Unit: 2612

7. As for claims 8 and 19, Ukita discloses the area of two rows x two columns as disposed without any space therebetween. (See figure 2.) As for claim 11, the image pickup apparatus is not substantively distinct from the apparatus and operations of claims 1, 3 and 5, and is rejected for reasons discussed above. As for claims 12 and 13, the calculating means and disposition of signals claimed are not substantively distinct from the operation and signal disposition of claims 3 and 4.

Allowable Subject Matter

8. Claims 9, 10, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As for claim 9, Prior art teaches the use of an image pickup apparatus according to claim 1, but is silent on the issue of means for reading an addition signal of all signals in an area of four rows x one column. As for claim 10, prior art is furthermore silent on the issue of means for reading an addition signal of all signals in an area of one row x four columns. As for claims 20 and 21, although prior art teaches the use of an addition signal as a luminance signal, it is silent on using a signal comprised of the addition of all signals in an area of four rows x two columns and two rows x four columns.

9. Claims 22 and 23 are allowed. Although prior art discloses an image pickup apparatus with a plurality of pixels, and color filter as claimed, it does not teach calculating a difference signal, nor the storage means in the manner claimed.

Conclusion

Art Unit: 2612

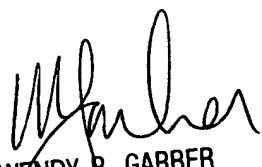
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Toppin whose telephone number is (703) 305-8144.

The examiner can normally be reached on Monday through Friday 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service whose telephone number is (703) 306-0377.

CJT
December 13, 2002


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600